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by applying to the *Nova* in each observation the correction to the mean "J. D. M." value of the comparison stars employed in that observation.

G.M.T. 1905. d	Settings on *Nova*.	Comparison Stars.	*Nova*. m	Weight.	Remarks.
Aug. 31.79	4	*c* .	10.32	1	Obsr. R. G. AITKEN. For check, etc.
31.84	16	*abde*	10.22	4	Good conditions.
Sept. 1.76	16	*abd*	10.70	3	Through clouds.
2.76	16	*abde*	10.45	4	Sky threatening.
3.70	16	*abde*	10.52	4	Moon.
4.72	16	*d*	10.46	3	Moon, smoke.
5.68	12	*d*	10.46	2	Moon, smoke. Seeing variable.
6.69	12	*d*	10.29	2	Moon. Smoke high and uneven.
7.71	12	*d*	10.66	2	Moon shining on objective.
10.68	12	*de*	10.73	3	Moon.
11.71	8	*abcde*	10.63	2	Moon.
12.73	..	(*d*)	....	..	Usual brightness.
13.70	..	(*d*)	....	..	Usual brightness.
14.70	6	*d*	10.68	1	Moon.
15.71	6	*abcdc*	10.75	1	Moon.
16.74	..	(*d*)	....	..	Usual brightness.
18.71	..	(*d*)	....	..	Usual brightness.
19.72	8	*abcde*	10.89	2	Good conditions.
20.69	8	*abcde*	10.90	2	Good conditions.
22.68	29	*d*	10.96	5	Clouds threatening.

I have used the term "weight" accurately, indicating merely the *number* of observations or groups of four settings, the weight being modified, as on the 8th, when it was thought that a smaller number of observations made under normal conditions would have yielded a result of the same reliability. The effect of moonlight is very small and no correction has been made for it.

The rate of decline is now about one magnitude a month; but my observations of the first week show an unmistakable increase of brightness of nearly half a magnitude. This oscillation and the other observations can be represented fairly well by a curve of eight days' period.

September 23, 1905. JAMES D. MADDRILL.

NOTE ON THE SPECTRUM OF *NOVA AQUILÆ* NO. 2.

Nova Aquilæ No. 2 was observed visually with the one-prism spectrograph on the night of September 5th, when its magnitude was about 10.5 on the Harvard scale. At that time the spectrum was similar to that of *Nova Geminorum,* as observed by Drs. Reese and Curtis on April 1, 1903. (See *L. O. Bulletin,* Vol. II, No. 37, pp. 59, 60.) The spectrum consisted of a number of bands, the brightest of which was easily identified as H_β by means of the neighboring iron lines in the iron spark. A faint band in the region of λ 4600, and the still fainter Hγ band, could also be distinguished. A series of maxima extending from the region of H_β toward the red, giving almost the appearance of a continuous spectrum, was also observed. The seeing was poor and the image very faint, due to a great amount of smoke in the air, making the identification of the various bands (with the exception of H_β) quite difficult.

Although the *Nova* was very faint, two fair spectrograms of it were obtained with the one-prism spectrograph, as follows:—

Plate.	Date, G.M.T.	Exposure.	Slit Width.	Emulsion.
3986A	1905 Sept. 6.8	3 hours	.004 inch	Seed 27
3994A	1905 Sept. 10.7	4 hours	.004 inch	Seed 27

The plates, in the region common to the visual and photographic rays, confirm the observations of the 5th of September. The exposure time was about correct for the H_β band, and much too short for the others. The following is a brief description of the bands and their approximate wave-lengths, which were obtained by interpolation from the iron comparisons lines.

H_β band: Strong; limits, λ 4845–4885; edges fairly sharp.

Band at λ 4600: Intensity about one fifth that of H_β; limits not sharply defined, but approximately from λ 4590–4710; fades off gradually on both sides.

Hγ band: Intensity one tenth (or less) that of H_β; width 50–60 A. U.; sharp minimum at λ 4345.

H_δ band: Very faint; width about 70 A. U.

A faint continuous spectrum extends from the region λ 4500 to that of the Hγ band. H_ϵ and the so-called nebular lines, with the possible exception of λ 5007, do not show on the plates.

It will be noticed that the relative photographic intensities given above are very unlike those of *Nova Geminorum* in 1903 (l. c.). While this may be due to a real difference in the stars, we are at present unable to say to what extent it has been accentuated by differences in the emulsion and atmospheric conditions.

J. H. MOORE,
1905, September 30th. S. ALBRECHT.

PHOTOGRAPHS OF *NOVA AQUILÆ* NO. 2.

Photographs of *Nova Aquilæ* No. 2 have been obtained with the Crossley reflector since August 31st, with exposures ranging from ten seconds to two and one-half hours. No indication of any nebulosity surrounding the *Nova* is shown on these plates. The photographic magnitude on August 31st was about 9.2 on the DM. scale, and by September 4th it had faded several tenths of a magnitude.

The following position of the *Nova* was obtained from a plate taken on October 1st with an exposure of ten seconds:—

$$\alpha\ 1905.0 = 18^h\ 57^m\ 4^s.8$$
$$\delta\ 1905.0 = -4^\circ\ 34'\ 53''$$

S. ALBRECHT.

PROGRESS OF WORK AT MOUNT WILSON.

Director HALE, of the Solar Observatory at Mount Wilson, is in Europe, and the other members of the staff find their time so fully occupied that notes on the work must wait until later.

A letter from Professor RITCHEY, however, from which I am permitted to quote, states that satisfactory progress is being made both in the construction of instruments and buildings and in the work of actual observation. Arrangements are now being made for the erection of a dome for the five-foot reflecting telescope.

Professor BARNARD, of the Yerkes Observatory, who has been at Mount Wilson since last January, has completed his series of photographs of the Milky Way, and has dismounted the Bruce photographic telescope preparatory to his return to Williams Bay.

The Smithsonian Expedition, under Professor ABBOT, which has been carrying on investigations on solar radiation at Mount Wilson, during the past summer, still occupies its station, but will complete its programme in a few weeks.

Professor HALE is expected to return to the observatory about October 20th.

R. G. A.